

## **STATEMENT OF BASIS**

Bakery Feeds  
Albertville Plant  
Albertville, Marshall County, Alabama  
Facility No. 711-0057  
2<sup>nd</sup> Renewal

This draft renewal Title V Major Source Operating Permit (MSOP) is proposed under the provisions of ADEM Admin. Code r. 335-3-16. The above named applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans, and other documents attached hereto or on file with the Air Division of the Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit. The current MSOP (1<sup>st</sup> Renewal) was issued on October 17, 2013. The only change to the current MSOP was an Administrative Amendment for a name change on April 20, 2017.

### **Facility Operations**

Bakery Feeds' Albertville Plant is an existing facility that produces a proprietary poultry feed ingredient known as Cookie Meal<sup>®</sup> from purchased grain-based bakery products such as cookies, crackers, pretzels, cereals, breads, snack foods, and dough. The significant source of air pollutants is the bakery scrap drying process, which utilizes a 50 TPH rotary dryer directly heated by a 50 MMBtu/hr biomass burner (Unit 001). Insignificant activities include the receiving area for blending stock material (EP-04); the finished product loadout area (EP-05); and the paper separation cyclone (EP-03) and the cooling screw conveyor cyclone (EP-06), both of which are located and vent within the process building. There have been no changes to the process since the first MSOP renewal.

### **Applicability: Federal Regulations**

#### *Title V*

This facility is considered a major source under the Title V regulations because potential emissions of particulate matter (PM; based on allowable emissions) and volatile organic compounds (VOC) exceed the 100 TPY major source threshold for criteria pollutants. It is a minor source of Hazardous Air Pollutants (HAP) as the potential HAP emissions are less than the 10/25 TPY major source thresholds for a single HAP and combined HAP.

#### *Prevention of Significant Deterioration (PSD)*

Bakery Feeds is located in an attainment area for all criteria pollutants. The operations at this facility are not classified in one of the major stationary source categories listed in ADEM Admin. Code r. 335-3-14-.04(2)(a). Therefore, the major source threshold of

concern is 250 TPY for criteria pollutants. Bakery Feeds is a synthetic minor source under the PSD regulations for VOC emissions. The bakery scrap drying process is limited to 235 TPY of VOC. This limit was established in the initial construction permit for this process to avoid a PSD review for the facility prior to its initial construction. The potential emissions for all other criteria pollutants from the plant are less than 250 TPY without any restrictions. Therefore, the facility is a true minor source of all criteria pollutants except VOC.

#### NSPS

Bakery Feeds has no sources included in any NSPS source categories. The biomass burner provides direct heat to the rotary dryer and is therefore not subject to NSPS, 40 CFR 60, Subpart Dc.

#### MACT

Bakery Feeds is a minor source of HAP emissions and is not subject to any MACT regulations under 40 CFR 63. Furthermore, since the burner supplies only direct heat to the rotary dryer, the unit is not subject to 40 CFR 63, Subpart JJJJJ, the National Emission Standards for Industrial, Commercial, and Institutional Boilers at Area Sources.

### **Applicability: State Regulations**

#### Particulate Matter

The bakery scrap drying process (001) is subject to the particulate matter (as TSP) emission limitations of ADEM Admin. Code r. 335-3-4-.04(1) for Process Industries-General. The allowable emission rate for this process is calculated using one of the following process weight equations and utilizing the process weight of the fuel to the biomass burner plus the process weight through rotary dryer:

$$E = 3.59P^{0.62} \text{ (P < 30 tons per hour) } \textbf{OR}$$

$$E = 17.31P^{0.16} \text{ (P } \geq 30 \text{ tons per hour)}$$

where E = Emissions in pounds per hour

P = Process weight in tons per hour

In addition to the above limitations, ADEM Admin. Code r. 335-3-4-.01(1) sets forth a visible emissions standard which states that each stationary source at the facility shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average. Bakery Feeds has a visible emission standard exemption for the biomass burner stack (EP-02) during periods of startup and shutdown.

#### Sulfur Dioxide (SO<sub>2</sub>)

The facility utilizes only direct heat from the biomass burner in the bakery scrap drying process. Therefore, the State SO<sub>2</sub> emission limitations of ADEM Admin. Code r. 335-3-5-.01(1) does not apply to this facility. Moreover, potential SO<sub>2</sub> emissions from the

combustion of natural gas, wood residuals, and biomass materials in the biomass burner are negligible.

### **Emission Monitoring**

#### 001 – Bakery Scrap Drying Process (Includes a Rotary Dryer and 50 MMBtu/hr Wood/Biomass Burner with Two Cyclones in Parallel)

**Particulate Matter:** The initial compliance stack tests conducted on the dryer stack on January 31, 2007, indicated compliance for particulate matter with an average emission rate of 12.24 lb/hr (the allowable based on the process weight during the test was 32.05 lb/hr). The results of the simultaneous Method 9 tests conducted during the particulate testing indicated a highest six-minute average of 9.38% opacity. During the current permit term, the ADEM-Air Division conducted a stack test for particulate matter on the dryer stack on July 12, 2017. The results indicated a particulate emission rate of 7.6 lb/hr (the allowable based on the process weight during the test was 30.76 lb/hr) and no Method 9 visible emissions test was performed. Bakery Feeds proposes to retain the existing emission monitoring requirements, which are as follows:

- While the process is operating, the instantaneous opacity of the dryer stack (EP-01) shall be determined at least weekly during daylight hours by an individual certified to determine the opacity of visible emissions.
- If the instantaneous opacity exceeds 10%, an individual certified to determine the opacity of visible emissions shall conduct a visible emissions observation within 30 minutes in accordance with 40 CFR 60, Appendix A, Method 9, for a minimum of 12 minutes.
- If the average opacity during a Method 9 observation exceeds 15%, corrective action shall be taken within 24 hours to identify and correct the problem. The opacity corrective action levels may be adjusted based on stack test results.
- To ensure proper operation, the dryer cyclones shall be inspected for proper operation and cleaned, if needed, a minimum of once per calendar week.

**Volatile Organic Compounds:** Bakery Feeds would determine compliance with the applicable VOC limit using a modified version of a commonly used formula for calculating VOC emissions in the baking industry. The formula allows BF to calculate its VOC emissions (assumed to be ethanol) based on the individual clients from which the raw materials were received. BF would be required to calculate the 12-month rolling total for VOC emissions within 10 days of the end of each calendar month.

### **Recordkeeping and Reporting**

Records of the startups, shutdowns, and malfunctions, visual observations, inspections, corrective actions, and emissions-related maintenance performed would be maintained and retained at least five years from the date of generation. Additionally, a written report would be submitted to the Air Division each calendar semiannual period certifying that the visual

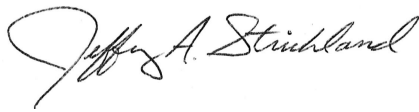
observations and inspections were completed as required and it would include the nature, date, and results of any excursions and corrective actions taken. The report would also certify whether the monthly VOC emission records were maintained during the reporting period, noting any exceedances, and include monthly and consecutive 12-month rolling emission totals over the 6-month reporting period.

### **Compliance Assurance Monitoring (CAM)**

There are no processes at the facility that meet CAM applicability criteria as the cyclones function as material separators that are considered inherent to the process.

### **Recommendation**

Based on the above analysis, I recommend that Bakery Feeds be issued the proposed renewal MSOP pending a public notice period and an EPA review.



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January 4, 2018  
Date